This documentation standard (DS) is used by project sponsors preparing a Waters of the U.S. Delineation Report (WOTUSDRWOTUSDR) in accordance with guidance from the U.S. Army Corps of Engineers (USACE). The WOTUSDRWOTUSDR may be utilized to acquire a Jurisdictional Determination from the USACE; therefore, the report must include sufficient detail for the USACE to verify whether aquatic resources identified within the project area would be jurisdictional under Section 404 of the Clean Water Act (CWA). Additionally, the WOTUSDR may be utilized to acquire authorization from the USACE under Section 404 of the Clean Water Act. All jurisdictional waterbodies and wetlands are regulated by one (1) of four (4) USACE district offices in the state of Texas. These districts include the following:

- Galveston District Office (SWG)
- Fort Worth District Office (SWF)
- Tulsa District Office (SWT)
- Albuquerque District Office (SPA)

Organize the WOTUSDR using the sections outlined in this DS, as described below. Retain in the project file any field notes, photographs, and other supporting data and documents produced in support of the report. Although the WOTUSDR may be prepared by a consultant and reviewed by the Environmental Affairs Division (ENV), the TxDOT district is the party that is ultimately responsible for preparation of a WOTUSDR.

To prepare a WOTUSDR, use the standards and instructions in this DS to enter project-specific information into the required sections of the associated template. For questions about or assistance applying these standards, contact the TxDOT district representative or ENV's Natural Resources Management Section at ENV-water@txdot.gov.

Cover

If the report is in draft form, retain the hyphen and word "Draft" at the end of the report title. If the report is in final form, delete the hyphen and word "Draft."

Enter the road name and limits, project CSJ, TxDOT district, and month and year of the report.

Retain the footer verbiage if the project is under assignment by FHWA. Otherwise, delete the footer verbiage.

Table of Contents

Once the report is complete, make sure to update the Table of Contents and List of Tables by right-clicking and selecting "Update Field."

Add the project CSJ to the footer.

I. Introduction

Introduce the proposed transportation project and state when the delineation was completed. If the delineation was completed across several days, include the range(s) of days the site was accessed for

the delineation. If there were portions of the project area that could not be accessed due to right-of-entry (ROE) limitations, describe in the introduction.

Identify which USACE Regional Supplement to the USACE 1987 Wetlands Delineation Manual was utilized for the project. In the State of Texas, there are three (3) regional supplements, as follows:

- Atlantic and Gulf Coastal Plain Region (Version 2.0) - November 2010
- Great Plains Region (Version 2.0) - March 2010
- Arid West Region (Version 2.0) - September 2008

Ensure the references section is updated for the appropriate regional supplement.

List the attachments included in the delineation report. At a minimum, the report must contain the following attachments:

- Attachment 1: Figures
- Attachment 3: Representative Site Photographs

If the WOTUSDR delineates wetlands, the report must also contain the following attachment:

- Attachment 2: Wetland Determination Data Forms

For projects located within the jurisdiction of the USACE Galveston District, an additional attachment summarizing GPS attribute data collected for the project must be included. Refer to Appendix D of this DS for an example of this attachment.

Additional project-specific attachments may also be required. Ensure any additional attachments are summarized in Section 1.0 (Introduction) and listed appropriately in Section 8.0 (Attachments) of the report. Reorder and renumber, as appropriate.

II. Project Overview

Provide a project description, including the following information:

- Project type (e.g., bridge replacement, roadway widening, new location roadway, etc.)
- Roadway name
- Project limits (e.g., from SH 105 to FM 1774)
- Project location (city, county)
- Project length (miles)
- Amount of new right-of-way (ROW) required to complete the project (acres)
- Amount of temporary or permanent easements (acres)
- Amount of project area that could not be accessed due to ROE issues (if applicable)

In this section, retain reference to the following three (3) figures depicting the project location:

- Figure 1 Vicinity Map
- Figure 2 Aerial Overview Map
- Figure 3 Topographic Overview Map

Add additional descriptions for additional figures.

III. Ecological Site Description

In order for the USACE reviewer to understand the ecological context of aquatic resources within the project area, provide a description of the Land Resource Region (LRR) and Major Land Resource Area (MLRA) where the project is located. The LRR and MLRA for the project area can be located by accessing the link below (Flash must be installed in your browser to view the map).

http://apps.cei.psu.edu/mlra/

Provide information on typical soils, common plants, and climate data for the region identified. Information on the typical soils, vegetation, and climate associated with the LRR and MLRA for the project area can be found in the following document:

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_050898.pdf

In addition to a description of the regional ecological context of the project area, provide a description of the current conditions of the project site. Describe dominant habitat types and whether the project consists of existing roadway/ROW and/or new location roadway/ROW.

IV. Methods

4.1 Map and Database Review

The purpose of this section is to provide context for any aquatic resources that may be present within the project area. This data will support jurisdictional determinations. Some datasets (e.g., FEMA FIRM, LiDAR) may not be available for a proposed project area. If there are datasets that are not available for the project area, state so in the respective Methods and Results section for each dataset. Do not delete any Map and Database Review subsections from the report.

4.1.1 USGS Topographic Maps

Reference the 7.5 x 7.5-minute United States Geological Service (USGS) quad map reviewed for the project area. Quad maps can be identified by downloading the QUADS kmz file from the link below and viewing the file in Google Earth. The 7.5 x 7.5-quads can be viewed by clicking the “Search Results” layer of the QUADS file and zooming to the extent where the orange quad lines are visible.

http://www.metzgerwillard.us/quads/quads.html

4.1.2 USFWS NWI Data

Review the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) map as a contributing resource to help identify potential wetland features located within the project area. The NWI mapper can be viewed at the link below. Shapefiles compatible with ArcGIS can also be downloaded from this link by clicking the “Get Data” button at the top of the page.

https://www.fws.gov/wetlands/Data/Mapper.html

4.1.3 NRCS Soil Survey Data

Review the Natural Resources Conservation Service (NRCS) Web Soil Survey database to determine

what the listed soil units are within the project area. The Web Soil Survey map can be viewed at the link below. Shapefiles compatible with ArcGIS can also be downloaded from the link by clicking the "Download Soils Data" button at the top of the page.

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

4.1.4 Aerial Photography

Review aerial photography of the project area for signs of surface water, saturated soils, and aquatic resources. Identify the source of aerial imagery in this section, as well as in Section 7.0 (References).

For new roadway projects, projects that anticipate pursuing an approved jurisdictional determination (AJD), or for district-specific requirements, it may be necessary to review historic aerial imagery or infrared imagery to better understand the context of any aquatic resources located within the project area. If the report includes a review of historic or infrared aerial imagery, include the source of images in this section, as well as in Section 7.0 (References). If an attachment for aerial imagery is included as a part of this report, indicate that in this section, Section 1.0 (Introduction), and Section 8.0 (Attachments).

4.1.5 FEMA FIRM

Review available Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the project area to determine the location of any 100-year floodplains within the project area. FIRM panels can be viewed at the link below. Shapefiles compatible with ArcGIS can also be downloaded from this link by right-clicking the panel and choosing "Download county GIS data".

https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

FEMA FIRM panels may not be available for all project areas.

If a FEMA FIRM panel is available for the project area, retain the "data was reviewed" statement, and delete the "data was not available" statement. If a FEMA FIRM panel is not available for the project area, retain the "data was not available" statement, and delete the "data was reviewed" statement.

4.1.7 LiDAR

Review available Light Detection and Ranging (LiDAR) data to determine the elevation of any aquatic resources in the project area and compare it to the elevation of the 100-year floodplain. This information may help support the jurisdictional determination. LiDAR data can be located and downloaded from the following website:

https://data.tnris.org/

LiDAR data may not be available for all project areas.

If LiDAR data is available for the project area, retain the "data was obtained" statement, and delete the "data was not available" statement. If LiDAR data is not available for the project area, retain the "data was not available" statement, and delete the "data was obtained" statement.

4.2 Waters of the U.S. Delineation

This section summarizes the methodology utilized to delineate the boundaries of any waterbodies located within the project area and references the USACE Regulatory Guidance Letter for Ordinary

High-Water Mark (OHWM) Identification. Waterbodies are defined as open-water resources devoid of emergent vegetation below an OHWM. Some waterbodies, such as ponds, may have floating or submergent vegetation. All waterbodies, including ditches and regardless of jurisdiction, must be delineated within the project area.

This section also summarizes the methodology utilized to delineate the boundaries of any wetlands located within the project area, as well as references the appropriate regional supplement. All wetlands, regardless of jurisdiction, must be delineated within the project area. Ensure the correct regional supplement is referenced in this section. If there was no wetland delineation and, therefore, no regional supplement used, retain the un-edited "2010 Regional Supplement" verbiage.

Reference the type of GPS device that was used to collect data for the project. If the project was not completed within the USACE Galveston District, remove the following declaration unless true and accurate:

"All geospatial data was collected in accordance with the April 21, 2016 memorandum from the Galveston District of the USACE entitled, Standard Operating Procedure, Recording Jurisdictional Delineations using GPS."

This verbiage may be retained if the all geospatial data was collected in accordance with the memorandum, regardless of whether or not the project is located within the USACE Galveston District's regulatory jurisdiction.

4.2.1 Hydrology

Do not change the text in this section of the WOTUSDR template.

4.2.2 Vegetation

Revise the text in this section of the WOTUSDR template in order to accurately identify the regional supplement used in the delineation.

The date of the current NWPL must be included.

4.2.3 Soils

No changes should occur to the text of this section.

V. Results

5.1 Map and Database Review

Describe the results for each map and database review subsection, beginning with 5.1.1. If there were any datasets that were not available for the project area, indicate so in the respective results subsection(s) for each dataset by retaining the appropriate provided text.

5.1.1 USGS Topographic Maps

This section should describe relevant information observed on topographic maps for the project area.

- Summarize the typical elevation and drainage direction within the project area.

- List any observable aquatic resources including ponds, streams, and wetlands depicted on topographic maps.
- If any streams are named on topographic maps, include the names of the streams in the text and on the corresponding figure(s) and table(s).

Figure 3 is a Topographic Overview Map for the project area. Reference Attachment 1, Figure 3 in this section.

5.1.2 USFWS NWI Data

Summarize the NWI features identified within the project area in the table provided. The NWI mapper includes attributes which define each NWI polygon. Use this information to fill out the table.

If no NWI features are identified within the project area, retain the “No NWI features” statement, and delete the “table below summarizes the NWI features” statement and corresponding table. If NWI features are identified within the project area, retain the “table below summarizes the NWI features” statement and corresponding table, and delete the “No NWI features” statement.

Figure 4 in Appendix 1 is an NWI Features Map for the project area and is referenced here. If no NWI features are visible within the project area, create Figure 4 at an extent that any NWI features located in the vicinity of the project area are visible on the map.

5.1.3 NRCS Soil Survey Data

Summarize the NRCS soil units identified within the project area in the table provided in the report template.

Utilize the following link to find descriptions of soil units.

https://soilseries.sc.egov.usda.gov/osdname.aspx

Utilize the following link to determine whether a soil unit is hydric or non-hydric.

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html

Figure 5 is an NRCS Soil Units Map for the project area and is referenced in Attachment 1.

5.1.4 Aerial Photography

For projects that only review current aerial photography, provide a paragraph description of observations from aerial imagery for the project area. Focus the description on signatures that are indicative of the presence or absence of aquatic resources. In this situation, retain the paragraph description of observations, and delete the “Historical aerial imagery” statement and corresponding table.

For projects that review historic aerial imagery, complete the table starting first with observations for the project area in the oldest aerial photograph available. Once the historical context for the project area has been established for the oldest photograph, identify changes observed within the project area for each subsequent photograph. If no changes are visible from one year to the next, state in the “Observation” column of the table that “no changes are visible within the project area.” In this situation, retain the “Historical aerial imagery” statement, reference to Attachment 3, and associated table, and delete the “Insert paragraph” statement.

5.1.5 FEMA FIRM

Describe the location of any 100-year floodplains within, or in the vicinity of, the project area. If Base Flood Elevation (BFE) data is available, provide the BFE listed within the project area. If FEMA FIRM data is available for the project area, create a FEMA FIRM figure for the project area and reference the Figure # and attachment in this section. If no 100-year floodplain is visible within the project area, create the map at an extent so that any floodplains located in the vicinity of the project area are visible in the map. In this situation, retain the “review of FEMA FIRMs” statement, and delete the “FEMA FIRMs were not available” statement.

If FEMA FIRM maps were not available for the project area, retain the “FEMA FIRMS were not available” statement, and delete the “review of FEMA FIRMs” statement.

5.1.7 LiDAR

Summarize observations visible in the LiDAR dataset for the project area. Describe the elevation changes throughout the project area and indicate whether any drainage features are visible by the contour lines. If this is situation, retain the “review of LiDAR data” statement/description and associated figure reference (by number and attachment), create a LiDAR map, and delete the “LiDAR data was not available” statement.

If LiDAR data is not available, retain the “LiDAR data was not available” statement, and delete the “review of LiDAR data” statement/description and associated figure reference, and do not create a LiDAR map.

5.2 Waters of the U.S. Delineation

All waterbodies and wetlands, including ditches and regardless of jurisdiction, identified within the project area must be summarized in this section and depicted on the associated figure. If no waterbodies or wetlands are identified within the project area, retain the “No WOTUS were identified” statement, retain the reference to Figure 8 only if sample point data was collected, and delete the “table below summarizes” statement and associated table.

If WOTUS were identified, delete the “No WOTUS were identified” statement, and summarize the waterbody/wetland features identified during the delineation in the table provided. All applicable fields in the table must be completed.

Waterbody/wetland feature types include the following:

- Perennial stream
- Intermittent stream
- Ephemeral stream
- Drainage ditch
- Palustrine emergent
- Estuarine emergent
- Palustrine scrub-shrub
- Palustrine forested
- Playa lake
- Open water
- Pond/Impoundment
- Other stream

- Other wetland
- Other non-stream, non-wetland waterbody

Create a waterbody and wetland map that depicts the location of all waterbody boundaries and wetland delineation data collected within the project area, including sample points, location of transect lines (if applicable), and all wetland boundaries (if applicable). The figure must identify all waterbodies and wetlands within the project area, regardless of jurisdiction, and differentiate between those that are potentially jurisdictional and those that are not potentially jurisdictional. The figure should be created such that all features are viewable on one or more black and white, 8.5 x 11" sheets of paper. Retain the figure and attachment reference in this section.

If applicable, the wetland determination data forms in Attachment 2 must be completely filled out. Common errors include:

- ID nomenclatureand geospatial locations inconsistent with figures and tables in the report
- Vegetation data is inconsistent with data in the report, or showing incorrect indicator statuses
- Soil profile data is incomplete or is missing a hydric soil indicator

If applicable, ensure that Attachment 4, Representative Site Photos, includes a representative photograph of each waterbody and wetland feature observed within the project area.

5.2.1 Hydrology

State whether normal circumstances were present for hydrology. If normal circumstances were not present, state what the exceptions were. State whether there were any naturally problematic conditions for hydrology. If naturally problematic conditions were present for hydrology, explain.

If sample point data indicated wetland hydrology, summarize the wetland hydrological indicators observed throughout the project area in the table provided. This summary information must be based on the data presented on the wetland determination data forms included as Attachment 2 of the report. Retain the table reference, complete the table, and delete the "No sample points exhibited" statement.

If no sample points exhibited wetland hydrological indicators, retain the "No sample points indicated" statement, and delete the table reference and table. In either case, retain the reference to Attachment 2.

5.2.2 Vegetation

State whether normal circumstances were present for vegetation. If normal circumstances were not present, state what the exceptions were. State whether there were any naturally problematic conditions for vegetation. If naturally problematic conditions were present for vegetation, explain.

Summarize the dominant vegetation observed throughout the project area for each distinct habitat type in the tables provided in this section of the template. Include one distinct habitat type per table, and list the associated dominant plant species within that table. It may be necessary to add or delete tables depending on the quantity of distinct habitat types observed within the project area. If there is only one table, delete the "s" in the table reference. Dominant vegetation must be based on the data presented on the wetland determination data forms included as Attachment 2 of the report, and the date of the current NWPL must be included.

5.2.3 Soils

State whether normal circumstances were present for soils. If normal circumstances were not present, state what the exceptions were. State whether there were any naturally problematic conditions for soils. If naturally problematic conditions were present for soils, explain.

If sample point data indicated hydric soils, summarize the soil types observed throughout the project area in the table provided. This summary information must be based on the data presented on the wetland determination data forms included as Attachment 2 of the report. Retain the table reference, complete the table, and delete the "No sample points exhibited" statement.

If no sample points exhibited hydric soils, retain the "No sample points indicated" statement, and delete the table reference and table. In either case, retain the reference to Attachment 2.

VI. Conclusion

Insert the road name/project name, endpoints, city, county, and CJS for the project, along with the delineation date.

For all aquatic resources identified within the project area, provide an opinion on jurisdiction. Jurisdictional opinions should be based on guidance provided from the 2008 Rapanos court decision document available at the following link:

https://www.epa.gov/sites/production/files/2016-04/documents/rapanosguidance6507.pdf

Examples of jurisdictional determination opinions include the following:

- Stream 1 and Stream 2 are relatively permanent waters (RPWs) that exhibit a direct downstream connection to a TNW. Stream 1 and Stream 2 are tributaries to Camp Creek, which flows into Caney Creek, a TNW. Due to Stream 1 and Stream 2's continuous surface connection to a TNW, the USACE will likely assert jurisdiction over these features.
- Wetlands 1-6 are either directly abutting or adjacent to RPWs with a downstream connection to a TNW; therefore, the USACE will likely assert jurisdiction over Wetlands 1-6.
- Four (4) agricultural stock ponds were observed to be excavated wholly within uplands. These features are not associated with any defined streams with a downstream connection to a TNW and are located outside of the 100-year floodplain; therefore, the professional opinion offered in this report is that the above referenced features would likely not be considered jurisdictional by the USACE.

Insert the name of the USACE district office with Section 404 jurisdiction over the project area.

VII. References

Ensure the references section of the report is updated with all sources utilized to prepare the report. Omit references that were not utilized to prepare the report. Use a single standard style, and be consistent when citing references. Update all applicable references in the template with the appropriate information for your project (i.e., county, access date[s], and the appropriate regional supplement[s]).

VIII. Attachments

List all attachments referenced throughout the report in this section. Ensure consistency between this list and the list presented in Section 1.0 (Introduction) of the report.

XIII. Appendices to this Documentation Standard

Included in this documentation standard are the following three (3) appendices that provide examples of the report's associated attachments:

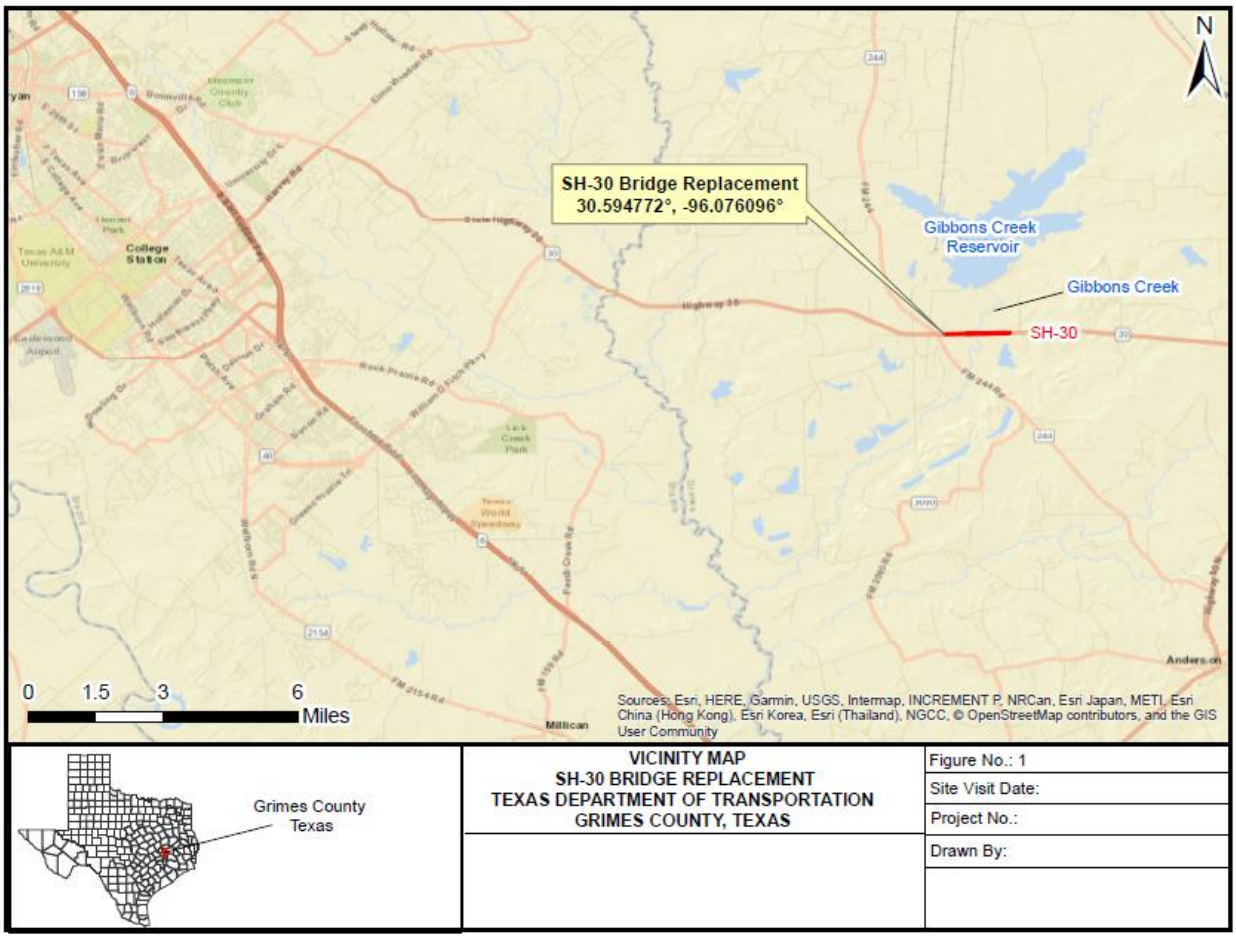
- Appendix A – Example Figures
- Appendix B – Example Representative Site Photographs
- Appendix C – Example GPS Attribute Table

XIII. Using the Report Template

- The report template is saved as a ".dotx" file (Word Template). When you open the document, it will automatically open an editable ".doc" file. Save this document on your drive.
- Text highlighted in yellow in the report template is text that is project-specific and should be updated accordingly.
- The template utilizes Styles in Microsoft Word. To see the styles applied in Microsoft Word, open the "Styles" pane found in the "Home" tab. The following styles should be utilized throughout the report:
    - Level 1 Headers (1.0) = Heading 1
    - Level 2 Headers (1.1) = Heading 2
    - Level 3 Headers (1.1.1) = Heading 3
    - General Text = Body Text
    - Table Titles = Caption
- If the document appears to be applying the wrong style, highlight the section you wish to change, and choose the correct style in the "Styles" pane.
- If you add or remove attachments to the report, ensure that you add the appropriate cover sheets after Chapter 8.0 of this report.

Appendix A

Example Figures



Appendix B

Example Representative Site Photographs

Photo 1: Typical upland herbaceous vegetation

Photo 2: Typical upland forested vegetation

Appendix C

Example GPS Attribute Table

Documentation Standard for Waters of the U.S. Delineation Report
Appendix C – Example GPS Attribute Table

GPS Data Attribute Table

Unique Number	Unique Name	Date Recorded	Receiver Type	X (Easting)	Y (Northing)	Latitude	Longitude	Number of Satellites	PDOP	Standard Deviation	Correction Status	Distance Between Points
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000
												0.000000

The following table shows the revision history for this document.

Revision History	
Effective Date Month Year	**Reason for and Description of Change**
August 2019	Version 1 released